

CLAIMS

1. A method for positioning a subscriber terminal (MS) in a packet-switched mobile telephone network, wherein for positioning the terminal a message is passed via a base station controller (GERAN, BSC, PCU) of the mobile telephone network; wherein for implementing the communications required for the positioning, both circuit-switched and packet-switched messages are used in the base station controller (GERAN, BSC, PCU, RNC) of the mobile telephone network; an association is established between these messages for transferring data relating to a certain positioning between packet-switched and circuit-switched functionality.
2. A method according to claim 1, wherein the data related to a certain positioning is data related to a certain location request.
3. A method according to claim 1, wherein the data related to a certain positioning is data related to the positioning of a certain subscriber terminal.
4. A method according to claim 1, wherein the determination of position is carried out by a location centre (SMC), and that the connection between the base station controller (GERAN, BSC) and the location centre (SMC) is a circuit-switched connection, and the other connections in the mobile telephone network are packet-switched connections.
5. A method according to claim 4, wherein a core network element (SGSN) of the mobile telephone network will pass the location request to the base station controller (GERAN, BSC) in packet-switched form with a packet identifier (BSSGP/TLLI) to establish a circuit-switched connection.
6. A method according to one of the above claims, wherein the said association is established by correlating the packet-switched message identifier (TLLI) with the circuit-switched message identifier (SCCP-ID).

7. A method according to claim 6, wherein the packet-switched message is converted into a message that can be forwarded under a circuit-switched protocol.

5 8. A method according to claim 6, wherein the circuit-switched message is converted into a message that can be forwarded under a packet-switched protocol.

9. A method according to claim 1, wherein the packet-switched
10 functionality comprises a packet-switched protocol (BSSGP).

10. A method according to claim 1, wherein the circuit-switched
functionality comprises a circuit-switched protocol (SS7).

11. A method according to claims 4 and 10, wherein the connection
15 between the base station controller (GERAN, BSC, RNC) and the location centre (SMLC) is performed over the Lb interface using the SS7 protocol.

12. A system for positioning a subscriber terminal in a packet-switched
20 mobile telephone network, said network comprising a core network element (SGSN), base stations (B), a base station controller (RNC, GERAN) controlling the base stations, and a mobile terminal (MS) of the mobile telephone network; and the connections in the mobile telephone network are arranged in a packet-switched fashion,

25 wherein the system comprises

a location unit (SMLC) for determining the position of the terminal (MS),
functionally connected with the base station controller of the mobile telephone
network, and that the connection between the base station controller (RNC,
GERAN) and the location unit (SMLC) is circuit-switched, and the base station
30 controller (RNC, GERAN) comprises

both circuit-switched (BSC, SS7) and packet-switched (PCU, BSSGP)
functionality for processing circuit-switched and, respectively, packet-switched
messages,

means for establishing an association between the circuit-switched and the

packet-switched functionality for the transmission of data related to a specific positioning between the packet-switched and the circuit-switched functionality.

13. A system according to claim 12, wherein the circuit-switched
5 functionality comprises a circuit-switched protocol stack (SS7), and the packet-switched functionality comprises a packet-switched protocol stack (BSSGP).

14. A system according to claim 12, wherein the base station controller
(RNC, GERAN) comprises means for converting a packet-switched message into
10 a circuit-switched message.

15. A system according to claim 12, wherein the base station controller
(RNC, GERAN) comprises means for converting a circuit-switched message into
a packet-switched message.

16. A system according to claim 12, wherein there is a Lb interface
between the base station controller (RNC, GERAN) and the location unit (SMC),
and the communications over the said Lb interface are arranged to be conducted
using the SS7 protocol.

17. A system according to claim 12, wherein the system comprises the
obtaining of a signal from the terminal (MS) in order for the location unit (SMC)
to be able to determine the position of the terminal.

18. A network element (RNC, GERAN) of a packet-switched mobile
communications system, comprising means (PCU, BSSGP) for implementing
packet-switched functionality for the processing of packet-switched messages,
wherein the network element comprises

- means for implementing circuit-switched (BSC, SS7) functionality for
30 processing circuit-switched messages, and
means for establishing an association between the circuit-switched and the
packet-switched functionality for the transmission of data related to a specific
communication between the packet-switched and the circuit-switched
functionality.

19. A network element according to claim 18, wherein it comprises means for establishing a circuit-switched connection to the location unit (SMLC),

5 means for establishing a packet-switched connection to the core network of the mobile communications system,

means for processing communications related to the positioning of a mobile communications terminal and for associating packet-switched and circuit-switched positioning communications with each other.

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